REMARKS

Claims 1, 3 through 6, 8 through 10 and Claims 16 through 21 are pending in the application.

Claim 17 has been amended to clarify that products in accordance with the invention include carboxylic acid consisting of sorbic acid and optional amino acid composition. Support for this amendment can be found in the Application as filed, for example on Page 10, line 29 through Page 11, line 11.

Applicants respectfully submit that this response does not raise new issues, but merely places the above-referenced application either in condition for allowance, or alternatively, in better form for appeal. Reexamination and reconsideration of this application, withdrawal of all rejections, and formal notification of the allowability of the pending claims are earnestly solicited in light of the remarks which follow.

The Claimed Invention is Patentable in Light of the Remaining Art of Record

Claims 1, 3 through 6, 8 through 10, 16 and 18 through 21 stand rejected in light of United States Patent No. 6,183,794 ("US 794") to Kaesler et al. in view of United States Patent No. 6,461,607 ("US 607") to Farmer and further in view of DE 00 35 00 187 ("DE 187"). Claim 17 stands rejected as anticipated by US 794.

Applicant respectfully notes that GB 2 153 670 A ("GB 670") is the English language equivalent of DE 187. Accordingly, the remarks directed to GB 670 below are intended to distinguish cited DE 187 as well.

It may be useful to consider the invention as recited in the claims before addressing the merits of the rejection. The products of the invention include sorbic acid and at least one probiotic. Advantageously, the products of the invention comprise at least 90 % by weight sorbic acid, as recited in the claims as amended.

In particularly beneficial aspects of the invention, the sorbic acid and probiotic are present in a weight ratio of 15:1 to 99:1, as recited in Claim 16.

In further advantageous embodiments, the products of the invention include carboxylic acid consisting of (i) sorbic acid and (ii) optional amino acid composition, as recited in Claim 17.

In additional beneficial embodiments, feedstuffs in accordance with the invention may further include an amino acid composition comprising L-lysine HCl, DL-methionine and L-threonine, as recited in Claim 21.

The primary reference does not teach or suggest the claimed invention.

US 794 is directed to propionic acid compositions that are less corrosive and malodorous than propionic acid alone. (Col. 1, lines 7 – 10 and lines 17 – 19). In contrast to the Office Action's broad reference to the presence of "acid," US 794 specifically requires the presence of propionic acid, in a minimum amount of 78%. (Col. 2, lines 18 – 27 and lines 52 - 54).

US 794 generically notes that its compositions may contain additional C_1 to C_8 carboxylic acids, in unspecified amounts. (Col. 3, lines 1 – 3). US 794 then goes on to provide a generic list of suitable additional carboxylic acids, culminating in the preferred incorporation of formic or acetic acid. (Col. 3, lines 3 – 10). Although providing a laundry list of acids, US 794 goes on to expressly teach that the alkali metal or alkaline earth metal salts of such acids are "customary" for agricultural applications. (Col. 3, lines 5 – 7).

US 794 further provides a similarly generic laundry list of additional categories of "auxiliaries" that may be included in its solutions, such as flavorings, colorings and the like. (Col. 3, lines 56 – 59). US 794 is silent as to any particular members of the auxiliary categories, however.

Accordingly, Applicant respectfully reiterates that US 794 does not teach or suggest the recited products comprising at least 90 % by weight sorbic acid. US 794, requiring a minimum of 78 % propionic acid, instead strongly teaches away from such compositions.

US 794 likewise does not teach or suggest products incorporating sorbic acid and probiotic in a weight ratio of from 15:1 to 99:1, as recited in Claim 16.

US 794 similarly does not teach or suggest the recited carboxylic acid consisting of sorbic acid and optional amino acid composition, as recited in Claim 17. In fact, US 794 strongly teaches away from such embodiments by requiring the presence of propionic acid.

US 794, whose compositions further require an ammonia neutralizer, similarly teaches away from products that do not include a neutralizing agent, as recited in Claim 18.

US 794, generically noting the optional incorporation of "auxiliaries," also does not teach or suggest the acid resistant probiotic(s) of Claim 19 or the particular probiotic(s) of Claim 20. Nor does US 794 teach or suggest the advantageous feedstuffs incorporating an amino acid composition comprising L-lysine HCl, DL-methionine and L-threonine recited in Claim 21.

Accordingly, Applicant respectfully submits that US 794, considered either alone or in combination with the remaining art of record, does not teach or suggest the products and/or feedstuffs recited within Claims 1, 3 through 6, 8 through 10 and 16 through 21.

Applicant further respectfully reiterate that US 607 does not cure the deficiencies within US 794.

US 607 is directed to antimicrobial-resistant bacteria, in particular to antimicrobial-resistant stains of *Bacillus coagulans*. (Col. 5, lines 33 – 36 and Col. 1, lines 10 - 15). Antibiotics, which are anti-microbial by nature, often kill beneficial flora along with pathogenic microorganisms. (Col. 3, line 62 – Col. 4, line 3). The primary impetus of US 607 is the co-administration of antimicrobial-resistant bacteria and antibiotics to re-establish beneficial flora eliminated by the antibiotic. (Col. 5, lines 33 – 40). For animal treatment, US 607 recommends its bacteria be combined with diatomaceous earth and/or bifidogenic oligosaccharide. (Col. 32, line 49 – Col. 33, line 6 and Col. 35, lines 14 – 18). US 607 also provides an extensive list of agents which may be incorporated into its compositions, including antioxidants, vitamins and the like. (Col. 23, line 66 – Col. 24, line 23). US 607 is altogether silent, however, as to the incorporation of acids within its compositions.

Consequently, US 607 most certainly does not teach or suggest the recited products comprising at least 90 % by weight acid, and particularly not the recited 90 % by weight sorbic acid. Nor does US 607 teach or suggest products incorporating sorbic acid and probiotic in a weight ratio of from 15:1 to 99:1, as recited in Claim 16, or products including carboxylic acid consisting of sorbic acid and optional amino acid composition, as recited in Claim 17.

As US 607 is silent as to acids, it further does not teach or suggest the acid resistant probiotic(s) of Claim 19.

Nor does US 607 teach or suggest the advantageous probiotics of Claim 20. US 607, directed to particular antimicrobial-resistant bacteria strains, instead teaches away from the probiotics of Claim 20.

US 607 further does not teach or suggest the advantageous feedstuffs incorporating an amino acid composition comprising L-lysine HCl, DL-methionine and L-threonine recited in Claim 21.

Accordingly, Applicant respectfully submits that US 607, considered either alone or in combination with the remaining art of record, likewise does not teach or suggest the products and/or feedstuffs recited within Claims 1, 3 through 6, 8 through 10 and 16 through 21.

GB 670 does not cure the deficiencies within US 794 or US 607.

GB 670 is merely directed to compositions used to treat keratosis in cows. (Page 1, lines 5 – 6). Highly advantageous keratosis treatments are known to contain liquid propylene glycol, which is hygroscopic and thus difficult to use. (Page 1, lines 23 – 31). The impetus of GB 670 is the binding of the propylene glycol to a carrier consisting of magnesium oxide, magnesium carbonate, magnesium peroxide and/or silica, in amounts of up to 300 percent by weight. (Page 1, lines 35 – 40). The binding allows the propylene glycol to be treated as a solid. (Page 1, line 40). In addition to propylene glycol, the keratosis treatments of GB 670 include calcium propionate, dextrose and additives. (Page 1, lines 35 – 37). Suitable additives noted in GB 670 include vitamins and the like. (Page 1, lines 53 – 56). GB 670's only reference to amino acid is its inclusion of DL-methionine within its working examples. (Page 2, line 34 – Page 3, line 4). GB 670 is silent as to the use of either probiotics or acids.

Consequently, GB 670 similarly does not teach or suggest the recited products comprising at least 90 % by weight acid, and most certainly not 90 % by weight sorbic acid. Nor does GB 670 teach or suggest products incorporating probiotic, much less products incorporating sorbic acid and probiotic in a weight ratio of from 15:1 to 99:1, as recited in Claim 16. GB 670 further does not teach or suggest carboxylic acid consisting of sorbic acid and optional amino acid composition, as recited in Claim 17.

GB 670 likewise does not teach or suggest the acid resistant probiotic(s) of Claim 19. And GB 670 most certainly does not teach or suggest the advantageous probiotics of Claim 20. In fact, GB 760 is altogether silent as to probiotics, as noted above.

GB 670, briefly disclosing the use of a single amino acid, further does not teach or suggest feedstuffs incorporating an amino acid mixture comprising L-lysine HCl, DL-methionine and L-threonine, as recited in Claim 21.

Accordingly, Applicant respectfully submits that GB 670, considered either alone or in combination with the remaining art of record, likewise does not teach or suggest the products and/or feedstuffs recited within Claims 1, 3 through 6, 8 through 10 and 16 through 21.

There would have been no motivation to have combined US 794, US 607 and GB 670. Applicant respectfully submits that merely because the references can be combined is not enough. Instead, the prior art must suggest the desirability of the claimed invention. MPEP 2143.01. US 794 seeks to improve the properties of propionic acid compositions. US 607 attempts to reestablish beneficial flora eliminated by conventional antibiotics. GB 670 is directed to improved ketosis compositions. These are altogether different fields of endeavors and issues solved, to say the least.

In fact, the formation of a composition comprising at least 90% by weight sorbic acid would render US 794 unfit for its intended purpose as an improved propionic acid composition, i.e. a composition including a minimum of 78 % propionic acid. MPEP 2143.01 citing *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984)(holding that if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no motivation to make the proposed modification).

Furthermore, the formation of the recited composition comprising at least 90% by weight sorbic acid would change the principle of operation of US 794, which seeks to improve the

properties of propionic acid compositions by partial neutralization and diol addition. MPEP 2143.01 citing *In re Ratti*, 123 USPQ 349 (CCPA 1959)(holding that if the proposed modification would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima face obvious).

However, even if combined (which Applicant submits should not be done), the claimed invention would not result. US 794 is directed to compositions that are required to incorporate a minimum of 78% propionic acid. US 607 merely discloses particular strains of anti-microbial resistant bacteria. GB 670 merely binds propylene glycol to a solid carrier. Consequently, even if combined, the recited products comprising at least 90 % by weight sorbic acid would not have resulted.

Nor would the combination have resulted in such products incorporating sorbic acid and probiotic in a weight ratio of from 15:1 to 99:1, as recited in Claim 16. And the combination most certainly would not result in the claimed carboxylic acid consisting of sorbic acid and optional amino acid composition, as recited in Claim 17.

The combination further does not teach or suggest products that do not include a neutralizing agent, as recited in Claim 18, or acid resistant probiotic(s), as recited in Claim 19. And the combination most certainly would not result in the particular probiotic(s) of Claim 20 or the amino acid mixture of Claim 21.

Accordingly, Applicant respectfully submits that Claims 1, 3 through 6, 8 through 10 and 16 through 21 are patentable in light of US 794, US 607 or GB 670, considered either alone or in combination.

CONCLUSION

It is respectfully submitted that Applicant has made a significant and important contribution to the art, which is neither disclosed nor suggested in the art. It is believed that all of pending Claims 1, 3 through 6, 8 through 10 and 16 through 21 are now in condition for immediate allowance. It is requested that the Examiner telephone the undersigned if any questions remain to expedite examination of this application.

It is not believed that extensions of time or fees are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time and/or fees are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required is hereby authorized to be charged to Deposit Account No. 50-2193.

Respectfully submitted,

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